



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-3

Issued: 8 Nov 2021 / 0830L (1330Z)

Valid: 10 Nov 2021 / 2058 - 2108L (11/0158 - 0208Z)



Forecast Discussion: High pressure centered across the Ohio River Valley this morning will slide southeast over the next two days, keeping the Spaceport in dry and cool conditions. Winds veer off the Atlantic into Tuesday as the high moves east, bringing a few more clouds and sprinkles into the coast. This pattern will continue into the primary launch window Wednesday night, and the main launch concern will be onshore moving Cumulus Clouds.

By Thursday, deepening southeasterly flow will bring a better chance for Atlantic showers in the vicinity of the Spaceport for the backup window. The main launch concerns for Thursday night will be Cumulus Clouds and Flight Through Precipitation.

The next storm system moves across the northern tier of the US late week, bringing another cold front through the eastern third of the US. Models have come into better agreement with the timing of the front as it approaches Florida. Scattered showers are expected Friday afternoon ahead of the front, lingering into Friday evening. Cumulus Clouds and Flight Through Precipitation will be the main launch concerns for the secondary backup window Friday night, but more unstable conditions will also bring the Surface Electric Field Rule into play.

Launch Day	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Cumulus Cloud Rule						
	Weather Conditions						Additional Risk Criteria	
	Weather:	None	Clouds				Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery:	Low
	Temp/Humidity:	73°F / 70%	Stratocumulus	Scattered	3,500	7,000	Booster Recovery Weather:	Low
Liftoff Winds (200'):	080° 10 - 15 mph	Cirrus	Scattered	30,000	35,000	Solar Activity:	Low	
24-Hour Delay	Probability of Violating Weather Constraints							
	30%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation						
	Weather Conditions						Additional Risk Criteria	
	Weather:	Isolated Showers	Clouds				Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery:	Moderate
	Temp/Humidity:	74°F / 80%	Cumulus	Scattered	3,500	10,000	Booster Recovery Weather:	Low
Liftoff Winds (200'):	120° 10 - 15 mph	Cirrus	Scattered	25,000	35,000	Solar Activity:	Low	
48-Hour Delay	Probability of Violating Weather Constraints							
	50%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Surface Electric Field Rule						
	Weather Conditions						Additional Risk Criteria	
	Weather:	Scattered Showers	Clouds				Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery:	Moderate
	Temp/Humidity:	73°F / 85%	Cumulus	Scattered	3,000	12,000	Booster Recovery Weather:	Low
Liftoff Winds (200'):	160° 7 - 12 mph	Cirrocumulus	Broken	25,000	35,000	Solar Activity:	Low	

Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.

Next Forecast Will Be Issued 9 Nov 2021